ness, when the heart has not acquired compensation for valvular lesion, or when compensation has been destroyed by muscular degeneration. Secondly, functional cardiac diseases, including, among others, disturbances arising from tea, coffee, tobacco, and alcohol, and the irritable hearts, of which palpitation is of emotional origin. Thirdly, slow hearts, when there is over-stimulation of the pneumogastric, or marked degeneration of the muscular wall of the ventricle—hearts in which digitalis is absolutely counter-indicated.

In all cases the tension of the pulse is increased, but its breadth is unaltered, so that the work of the heart is not made greater by contraction of the arterioles, the increase of tension being due to the fact that more blood is propelled through the arteries; thus prompt relief is afforded to venous congestion.

In old rheumatic hearts pain is relieved because the incompetency is relieved, and this is a guide for the administration of the drug in valvular lesions.

In aortic regurgitation it is the drug *par excellence*, having all of the benefits and none of the dangers of digitalis in that condition. In mitral stenosis it is absolutely contra-indicated, as, owing to the shortening of the diastole, sufficient blood cannot flow into the ventricle to permit of an efficient systole.

The author believes that with the intelligent use of cactus in suitable cases, we shall have greater success than with any other drug in use for diseases of the circulatory system.

SURGERY.

UNDER THE CHARGE OF

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SURGICAL ANATOMY OF THE PELVIS OF THE KIDNEY, AND ITS EXPLORATION.

LEGUEU (*Ann. des Mal. des Organ. Génito-urin.*, 1891, vol. ix., Nos. 6 and 7) directs attention to the normal anatomy of the pelvis of the human kidney. In the last few years incisions into the kidney or its pelvis for the removal of concretions have become more frequent. It is conspicuous, during these operations, that the pelvis of the kidney, in most cases, does not correspond with the descriptions of anatomists, and that the funnel-shaped pelvis is often wanting. The author has found in his investigations that the ampulla-form pelvis exists in only a limited number of cases. Usually the pelvis of the kidney is branched—that is, the ureter divides, without previously bellying, into the tubes that connect with the calyces of the kidney. Transition forms are often seen between the ampullar and ramified forms. The author, in common with other writers, states that the posterior part of the pelvis is always devoid of vessels.

The internal exploration of the kidney is next discussed. Two methods are open to the operator—either an incision into the pelvis, or an incision into the kidney substance itself. If the kidney is not enlarged, exploration of the pelvis with the finger is scarcely possible, because under normal conditions it is much too small. Different authors, therefore, use for examinations sounds which are introduced through small incisions in the pelvis. It is clear that the sound can in no way replace the palpating finger, especially in the parenchyma of the kidney, as encapsulated stones could scarcely be detected in this manner.

For the investigation by cutting into the kidney substance, Morris recommends an incision on the posterior surface of the organ. This is not to be advised, however, as one is never secure against free hemorrhage, and by this cut a great number of secreting elements are divided and destroyed; besides, a satisfactory examination is impossible. The incision usually preferred is that on the convex border of the kidney. In this operation severe hemorrhage and destruction of secreting elements are avoided. The condition of the kidney can be made out as far as its middle portion is concerned, but above and below the examination is unsatisfactory, inasmuch as the cut cannot exceed a certain limit. The author, therefore, suggests two incisions, one on the upper part of the convex border, and the other on the lower part of it. It is then possible to determine satisfactorily the condition of the corresponding part of the kidney through these cuts, while if a finger be introduced into each incision at the same time the middle portion of the organ can be carefully palpated.

[In *The Dublin Journal of Medical Science*, for February, 1892, DR. T. MYLES protests against the "loose and unscientific way in which anatomical names are used" in articles like surgery of the kidney. He adds, as an example of what he criticises, that one writer says: "I cut into the pelvis of the kidney from the front," and continues, "Now he could not do this, because the kidney has no pelvis, and if his statement means that he cut into the pelvis of the ureter from the front," it would indicate the recklessness of anatomical ignorance, as the renal veins and arteries completely conceal nine-tenths of the pelvis."

The expression "pelvis of the kidney," as used by surgical writers, although possibly open to anatomical criticism, indicates accurately the general space within the sinus into which the calyces open. Gray speaks of the pelvis "merging into the ureter proper." Jordan Lloyd says: "When the kidney is exposed through a lumbar wound, I puncture its lower end with a long-bladed tenotome, in a direction upward and inward, making for the current of the calyces. . . . Into this opening I pass a child's bladder-sound, and systematically explore the whole interior of the pelvis." Treves says: "The stone may be lost in the rush of fluid which escapes when the pelvis of a much distended kidney is opened." Morris says that a calculus may grow "in one of the calyces or in the pelvis of the kidney," and frequently speaks of the "renal pelvis." Jacobson, Thornton, and others speak of incisions into or through the "pelvis of the kidney."

It seems unnecessary, therefore, to reject the term which applies to a strictly defined anatomical and surgical region, even though we may, with Dr. Myles, question the possibility of safely opening it "from the front."—J. W. W.]

INTERMITTENT HYDRONEPHROSIS.

TERRIER and BAUDOUIN, in a study of this subject (*Revue de Chirurgie*, 1891, No. 12), arrive at the following conclusions: The intermittent variety of hydronephrosis has been little known until recent years, and appears to be more frequent than is generally thought.

This clinical variety has its origin in several different lesions. In the great majority of cases it constitutes a complication of displacements of the kidney. It is more frequently observed in females than in males, and is more common on the right side in women, while the left kidney seems oftener affected in men.

Occasionally the origin of the trouble is a calculus in the pelvis of the kidney, at other times a compression or temporary obliteration of the lower extremity of the ureter, while, in other cases, it is of congenital origin. It is also produced in the movable kidney by bending of the ureter, with or without torsion, at the time of the displacement. There is momentary arrest of the secreted fluid, with the formation of a hydronephrotic pocket, which empties itself as soon as the kidney resumes its normal position. Other causes are peripyelitic irritation, due to circulatory disturbance or to infection of the mucous membrane of the pelvis, and fibrous adhesions, whereby the sac is united to the upper part of the ureter, transforming an intermittent into a permanent hydronephrosis.

The alternations of filling up and evacuation of the pelvis of the kidney, due to the temporary obliteration of the ureter, can be explained clinically by the characteristic painful attacks, coming on in the course of a more or less altered state of the health, occurring at intervals of about a month, or sometimes oftener. These attacks, which present three stages—the beginning, the acme, and the terminal phase—are characterized by intense pains, sometimes intolerable, coincident with the appearance of a fluid tumor, rarely fluctuating, situated in most cases in the right flank, with a notable diminution in the quantity of urine voided.

These are the consequences of an abrupt flexion of the ureter, following the displacement of the kidney. Each crisis lasts several hours, and suddenly ceases when the kidney resumes again its normal position. The tumor disappears with the pains, and there is a considerable discharge of urine—the pelvis has emptied itself. Hydronephrosis, beginning in this way, may remain intermittent for a long time, may remain stationary, or may become aggravated during pregnancy. After a time, the collection becomes infected, the urine is purulent, and the dangers incident to this condition present themselves.

For the painful crises medical measures may be tried. If there is renal mobility nephrorrhaphy is advised. When there is permanent hydronephrosis which tends to progress, more radical measures are demanded. Tapping is to be rejected. If the lesions are double, it is recommended to make on the side most affected a fistula of the pelvis, but if the other kidney is healthy, it would be better to do at once a nephrectomy, as, if the surgeon is content with draining the cavity, a secondary nephrectomy will probably be necessary.

EXCISION OF STRICTURE OF THE DEEP URETHRA AND URETHROPLASTY FOR RADICAL CURE.

KEYES reports (*Journal of Cutaneous and Genito-urinary Diseases*, vol. ix., No. 11) a case successfully treated by this method. He divides strictures of the deep urethra into the soft, the cicatricial, and the inodular. The first of these, he claims, often yields permanently to dilatation, and the cicatricial to thorough division on the floor and roof of the canal, while the inodular is incurable radically without excision, with or without transplantation of foreign tissue.

The case reported is that of a man, aged sixty years, first seen by the author July 24, 1890. Twenty-eight years previously the patient had fallen across a beam, rupturing his urethra, with the usual symptoms—retention, abscess, infiltration, perineal fistula, etc. There had been no previous gonorrhœa. Perineal section was done at the time of the accident, but close recontraction followed.

When seen by the writer, a fine filiform instrument was with difficulty passed into the bladder, which the urethra clasped tightly. Urine was being constantly passed with great straining, largely through the perineal fistulæ. The stricture was laid open on the filiform guide. The contracted portion began in front of the bulb, and extended back under the pubic symphysis. The stricture was a dense fibrous cord with a minute central calibre, as large as a crow-quill and one and a half inches long. After division, the stricture immediately sprang together, owing to its density and elasticity. It was evident that it would be impossible to keep this passage open, and Monsel's suggestion of excision and transplantation of the inner layer of the prepuce was adopted. The patient had an abundant foreskin, which was disinfected and wrapped in hot bichloride compresses. The stricture was carefully dissected out, and by means of hot applications and pressure the bleeding was arrested. A piece of the inner layer of the foreskin, one and one-half by two inches, was rapidly removed and cleansed, placed for a moment in warm boric acid solution, and sutured in place in the roof of the gap left by the removal of the stricture. Four catgut sutures were used to attach it to the healthy urethra anteriorly, and several lateral sutures were also applied; no sutures were placed posteriorly, as it was impossible to reach the prostatic urethral end.

A large drainage-tube was passed into the bladder from the perineal wound, and a soft rubber catheter passed through the entire length of the urethra. The parts were dusted with iodoform, the catheter and tube made to press the transplanted mucous membrane in place, gauze packing applied, and retained by a T-bandage.

On the fifth day the dressings were removed, and the flap was found to be alive and adherent everywhere, except along the anterior edge and one anterior angle. The parts were repacked, and all dressings, including the vesical tube, were removed on the eighth day. The perineal wound healed promptly, and in the middle of the third week the patient went home, a distance of one hundred and sixty miles, with instructions to pass a 32 Fr. steel sound once a week. The patient, however, used a 21 Fr. sound, as he thought this large enough. Three months later he was seen, and reported himself perfectly well. At this time a 27 Fr. blunt sound disclosed a moderate linear obstruction at each end of the transplanted flap. The patient could hold his water half a day and all night, which he had not done for years before, and he had gained twenty pounds. He was seen again in September, 1891, and has remained perfectly well; urinates in a full stream, urine clear and free from shreds or pus. He had continued to pass a 21 Fr. sound once a month.

STRICTURE OF THE ŒSOPHAGUS.

NEWMAN (*Lancet*, London, vol. i., 1892, No. 5) writes at length on strictures of the œsophagus.

The diagnosis of organic stricture can usually be made without difficulty. The history of injury followed immediately by painful deglutition, which passes off in a few days or weeks, and which is followed at some remote period by a constantly increasing dysphagia, without pain, hemorrhage, or lymphatic enlargements, would point to organic stricture. In many cases, however, a clear history cannot be obtained, the patient not having knowledge of, or having forgotten, a previous injury. The mischief may even have happened while the patient was under the influence of alcohol, or during a fit of insanity.

On the other hand, a carcinoma may develop in a case in which there is a clear history of traumatism, but, as a rule, it is more apt to be protracted irritation which is responsible for malignant growths. Especial stress should be put upon the absence of pain, hemorrhage, and enlarged lymphatic glands in non-malignant cases. As carcinoma may exist, however, without these symptoms, the history of the case must be carefully reviewed, the age of the patient considered, and the character of the dysphagia and of the discharges noted.

Tertiary syphilis may manifest itself in a dysphagia, due either to the formation of a gumma, or to the contraction of an old lesion.

The author questions the existence of spasm of the fibres of the muscular coat in an otherwise healthy œsophagus, but has found this condition in cases in which there was a local irritation. This may or may not be associated with some other general or local condition which, if present, will also demand attention.

The prognosis in carcinoma of the œsophagus depends upon the seat of the growth—whether it is in a position in which surgical intervention is possible. If operation is not done, death will sooner or later inevitably occur, usually from starvation. If the new-growth begins in the upper part of the gullet, the disease is apt to be rapidly fatal. On the other hand, carcinomatous growths of the lower end of the œsophagus may run a very slow course. The hard will be very much more chronic than the soft variety of cancer.

Dr. Newman has collected the statistics of 556 cases of carcinoma of the œsophagus in which the mode of death was given, with the following result: Collapse and exhaustion, 390; inflammation of the lung, including gangrene, 91; pleurisy, 53; peritonitis, 17; perforation into heart, or bloodvessels, 15.

In benign tumors of the œsophagus the prognosis will depend upon their location, size, and rapidity of growth, and whether or not their removal is possible by operation. If situated high up, they may be cut off or ligated; or, if pedunculated and soft, the parasol-probang may dislodge them. In those cases in which operation is impossible, the seat of the growth and the probability of its interference with other functions must be considered in giving a prognosis.

Organic strictures, if seen early, may yield to dilatation with bougies. If a bougie can be passed, the prospect of recovery is good; but, if the constriction will not admit one of these instruments, gastrostomy becomes imperative.

A Contribution to the Surgery of the Œsophagus.

Gerster, in a study of the surgery of the œsophagus (*New York Medical Journal*, vol. lv., No. 6), presents the following conclusions: If a foreign body becomes lodged in the œsophagus, and cannot be displaced downward into the stomach or extracted without the employment of much force, it is imperative to perform external œsophagotomy at once. This operation, as now practised, is comparatively safe; its mortality for all classes of cases is given by Fischer as 20 per cent. The operation may be difficult if the case is complicated by a goitre or other cervical tumor. The conditions are parallel to those of strangulated hernia—an early operation is safe, a late one dangerous and often useless. Delay extending over twenty-four hours is never justified, and, if at the end of this period extraction by bloodless processes is not easy, the gullet should be incised at once.

If impaction has existed for more than twenty-four hours, frequent and persistent efforts at dislodgment are apt to be more dangerous than œsophagotomy, inasmuch as the patient's condition is apt to be bad from fever and starvation, while the manipulations in the fauces and œsophagus provoke nausea and vomiting which are depressing, and the risk of causing traumatic perforation is considerable.

In performing œsophagotomy, the incision should be made large enough to permit of comfortable manipulation without much traction. Blunt dissection is to be avoided, as the tissues are less viable and succumb to septic influences more easily when torn than when cut. The line of the incision is just in front of and parallel with the anterior border of the sterno-mastoid muscle, beginning a little below the cricoid cartilage and extending to the sternal insertion of the muscle. The omohyoid is drawn aside and the lateral margin of the thyroid gland is exposed to act as a guide. The great vessels with their sheath are to be drawn backward with the sterno-mastoid muscle. Dissection should proceed between two mouse-toothed forceps so that vessels in the line of the incision can be recognized and secured before being cut. If the sternal portion of the sterno-mastoid muscle is in the way, it may be cut. Care must be taken not to injure the recurrent nerves. The œsophagus may be recognized by its longitudinal fibres. If there is doubt, a urethral sound may be introduced through the mouth and the incision made on the point of this instrument. Fillets of silk passed through the edges of the cut facilitate manipulations within the gullet.

In the absence of septic complications which would usually be the case if early operation was performed, the edges of the œsophageal wound should be stitched with fine silk. The outer wound is to be packed loosely with iodoform gauze. A few silkworm-gut stitches may be introduced into the cutaneous edges of the wound, which are not to be brought together, however, until after the removal of the packing.

Alimentation by the mouth is permitted at once, liquid substances only being given, and in small quantities, which are to be swallowed while the patient is on his right side. Minute leakage frequently occurs, but this does not interfere with the prompt healing of the wound.

In those cases in which ulceration or sloughing has occurred, suture is not usually practicable, and is rarely safe. The wound should be packed and allowed to heal by granulation. The stomach-tube will probably be necessary in these cases, and may be inserted either through the wound, mouth, or nares.

Two cases are detailed in which the operation was performed; both recovered.

OBSTETRICS.

UNDER THE CHARGE OF

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The Prophylaxis of Puerperal Disease.

The question as to how far obstetric patients can be safely utilized in the study of obstetrics is still under debate, two opinions prevailing: one, that the use of such material is only safe when antiseptic injections as well as external antisepsis are employed; the other, that all injections and internal examinations are unnecessary and injurious. Frommel, of Erlangen, in an obstetric service of between five and six hundred patients, followed a line of treatment which embraced vaginal injections with bichloride solution, 1 to 2000. His clinic was open to about one hundred students, and in connection with the hospital there is a school for the training of midwives. He computes that in abnormal cases, where a thorough study of the case was necessary, from sixty to seventy examinations during the patient's stay in the hospital were found requisite. So long as he continued to employ prophylactic injections, he had no case of sepsis whose origin could be ascribed to his clinic. His morbidity rate varied from five and a half to seven and a half per cent. He was led for purposes of comparison to abandon the prophy-